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BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

BRINEY III, WALTER F

ART UNIT

PAPER NUMBER

2646

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/593,532

Applicant(s)

DENIES ET AL.

Examiner

Walter F. Briney III

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 and 24-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 23 and 37-45 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 8-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/16/01, 11/26/04</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

The first election requirement, was made because the applicant's specification (page 8) indicates that the grouping steps specifically recited in claim 2 are performed in addition to the identification steps performed in figure 1. As these steps are outlined in figures 1 and 2, it is clear that they define separate species under a similar genus. However, the applicant correctly indicates that claim 1, while apparently directed toward figure 1, and thus, the first species, does not specifically exclude the further operations of the second embodiment. Thus, an election of the second species would require searching the first species, rendering the restriction requirement moot. Therefore, the first election requirement is withdrawn.

The second requirement is maintained for at least the following reasons. First, the applicant argues on pages 8 and 9 that the subcombinations belong in the same class because they are all directed toward providing an indication signal. Yet, this was previously noted and indicated by the examiner in the restriction requirement on page 3 thereof; specifically, the examiner stated that claims 7, 37, 39-43 and 45 were linking claims that generically claim each subcombination A, B and C that are disclosed as usable together. Thus, all common elements of each subcombination are being considered. Second, the applicant suggests that the combination of providing an indication signal does not have utility in tone detection or echo cancellation. Clearly, these arguments are moot as they only identify differences between separate combinations (i.e. providing an indication signal and tone detection/echo cancellation)

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while ignoring that the subcombinations specifically recited are being subjected to a restriction requirement and not the linking claims.

The third requirement is maintained for the following reasons. First, the applicant has been shown to claim at least three subcombinations, each with two different species, creating a total of six different inventions to examine. Second, an inventor is limited to a patent for an invention. Therefore, it is clear that the second election requirement is necessary.

For the above reasons, it is clear that the applicant's reasons for traversal are untenable since each linking claim is being considered, each subcombination has separate utility, and because so many different embodiments are disclosed and claimed that a serious burden is placed on the examiner. Accordingly, the second and third requirement are FINAL.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1-3, 7, 23 and 37-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Stelman (US Patent 5,892,823).**

**Claim 1** is limited to a *method of providing an indication signal*. Stelman discloses a smart interface technology. The interface technology allows matching between a diverse set of conventional telephone base units and a second set of diverse terminal accessories, where the line interfaces for each device is unknown. See Abstract. Figures 7-9 depict the actual elements of the technology. Particularly, a four-wire phone line (i.e. *a communication pathway carrying signals*) is connected to the *interface device* (200), which inherently contains *conductors*. Stelman discloses analyzing the conductors for a dialtone (i.e. *analyzing the signals carried by the conductors to determine which of the conductors are active conductors*). As seen in figure 4, the dialtone detection steps provide dialtone detection data (i.e. *providing active conductor information...including a list of the active conductors*). This data is used to *determine* the receive lines from preset Rx pinout configurations as seen in figure 4. The results of this comparison determine the state of the configuration switches seen in figure 4, and since each switch has at least two states, it is inherent that the above function determines a first state ("on") if the detected pins match the known pins, and a second state ("off") otherwise. Therefore, Stelman anticipates all limitations of the claim.

**Claim 2** is limited to *the method of claim 1*, as covered by Stelman. Stelman discloses detecting the dialtone signal on a pair of lines by analyzing two *selected* conductors at a time, using the Rx input differential amplifier (Rx-1) seen in figure 8. Further, the signals are filtered using the switchable dialtone filter (Rx-6), which essentially limits the output to *alternating signals* of a frequency substantially equal to a

known dialtone signal. Inherently, a dialtone is detected if the output of the filter meets a certain threshold for a certain amount of time. Therefore, Stelman anticipates all limitations of the claim.

**Claim 3** is limited to *the method of claim 1*, as covered by Stelman. Clearly, active conductors can only be similar to interface class information if the active conductors are among the active conductor information. As seen in figure 4, if dialtone is detected on pins 2 & 3, for example, it is determined that the interface class pertains to that where the Rx pins are pins 2 & 3. Therefore, Stelman anticipates all limitations of the claim.

**Claim 7** is limited to *a method of providing an indication signal*. As expressed in the preceding section entitled Restriction/Election, the applicant has admitted that claim 1 is generic to claim 7. Therefore, Stelman has been shown to anticipate all generic elements of claim 7 as well. With regard to the further recitations of claim 7, figure 4 of Stelman depicts *grouping* pins that were detected as carrying dialtone. It follows that configuration of the switches involves *determining* (i.e. matching) the *provided group information* (i.e. Dialtone Detection pins) to *provided primary interface class information including information about pairing of conductors* (i.e. Rx Pinout pins) and *indicating* this to the configuration switches. Therefore, Stelman anticipates all limitations of the claim.

**Claim 23** is limited to *the method of claim 7*, as covered by Stelman. Clearly, *primary interface class information* can only be similar to *group information* if the *primary interface class information* is among the *group information*. As seen in figure 4, if dialtone is detected on pins 2 & 3 (i.e. *group information*), for example, it is determined

that the primary interface class information that relates to the group information is that where the Rx pins are groups as pins 2 & 3. Therefore, Stelman anticipates all limitations of the claim.

**Claim 37** is limited to *a discovery device*. Stelman discloses smart interface technology (SIT). See Abstract. Clearly depicted in figure 8 is a *first set of conductors (LINES 1-4)* associated with a modular jack (i.e. *first connector; figure 4*), configuration switches (2 and 3) and a *second connector* (Rx Level Ref.). Inherently, the modular RS-9 jack connects to a *communication pathway* (see figure 6) and the configuration switches provide a connection between the *first and second set of connectors*. Figure 7 depicts a computer (100) that controls the configuration switches (2) and (3) by way of the 32-bit addressable latch (1), the switches and latch depicted in figure 8. Therefore, Stelman anticipates all limitations of the claim.

**Claim 38** is limited to *the device of claim 37*, as covered by Stelman. Claim 38 recites steps that are essentially the same as claim 1, as covered by Stelman. As the computer is responsible for controlling the configuration switches, it follows that the computer is also instructed by software to perform the steps of claim 38. Therefore, Stelman anticipates all limitations of the claim.

**Claim 39** is limited to *the device of claim 37*, as covered by Stelman. Claim 39 recites steps that are essentially the same as claim 7, as covered by Stelman. As the computer is responsible for controlling the configuration switches, it follows that the computer is also instructed by software to perform the steps of claim 39. Therefore, Stelman anticipates all limitations of the claim.

**Claim 40** is limited to *the device of claim 39*, as covered by Stelman. Claim 40 recites steps that are essentially the same as claim 23, as covered by Stelman. As the computer is responsible for controlling the configuration switches, it follows that the computer is also instructed by software to perform the steps of claim 40. Therefore, Stelman anticipates all limitations of the claim.

**Claim 41** is limited to *the device of claim 37*, as covered by Stelman. As seen in figure 1, Stelman discloses selecting Rx lines, two at a time, and connecting them to the CPU by way of the *second connector* (Rx Level Ref) for dialtone analysis. Therefore, Stelman anticipates all limitations of the claim.

**Claim 42** is limited to *the device of claim 37*, as covered by Stelman. As seen in figure 8, Stelman discloses an *attenuator* (RX-2) between the *first and second connectors*. Therefore, Stelman anticipates all limitations of the claim.

**Claim 43** is limited to *the device of claim 42*, as covered by Stelman. As seen in figure 9, *two conductors* are *selected* and connected by way of a *shunt load*. Therefore, Stelman anticipates all limitations of the claim.

**Claims 44 and 45** recite essentially the same limitations as claims 1 and 7, respectively, and because Stelman performs all method steps using a CPU (100), Stelman anticipates all limitations of the claims.

#### ***Allowable Subject Matter***

The following is a statement of reasons for the indication of allowable subject matter:



2. **Claims 4-6 and 8-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

**Claim 4** is limited to *the method of claim 1*, as covered by Stelman. Stelman simply does not disclose how to determine if dialtone is present using the sampled Rx voltage level that is presented on the Rx level ref. Pin shown in figures 7 and 8. Therefore, Stelman anticipates all limitations of the claim with the exception of *determining an average amplitude voltage value for each of the conductors carrying a signal having an alternating voltage.*

The examiner takes Official Notice of the fact that detecting alternating signals was well known at the time of the invention. In particular, a detected signal is oftentimes sampled a plurality of times, and each sample is used to calculate an energy value that is compared to a threshold, that may be predetermined or adaptively varied. However, even by performing such an energy detection and threshold comparison, Stelman would only disclose determining an average amplitude voltage value for both conductors together summed together and not each conductor separately as claimed. Thus claim 4 is allowable over Stelman.

**Claims 5 and 6** depend on claim 4, and are allowable over Stelman for at least the same reasons.

**Claim 8** is limited to *the method of claim 7*, as covered by Stelman. Stelman selects two conductors at a time for pair analysis. However, Stelman simply does not disclose determining an autocorrelation value for each conductor, nor could the specification be modified to do so as Stelman relies only on a single-ended

measurement provided by pin Rx ref out from the analog integrated circuit (200). Thus, claim 8 is allowable over Stelman.

**Claims 9-13** are dependent on claim 8, and are allowable for at least the same reasons.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**